

assessment by an employer's qualified evaluator under this option is not portable—other employers are not permitted to use it to meet the requirements of this section.

(3) The employer must make the documentation for whichever option is used available at the site while the signal person is employed by the employer. The documentation must specify each type of signaling (*e.g.* hand signals, radio signals, *etc.*) for which the signal person meets the requirements of paragraph (c) of this section.

(b) If subsequent actions by the signal person indicate that the individual does not meet the Qualification Requirements (*see* paragraph (c) of this section), the employer must not allow the individual to continue working as a signal person until re-training is provided and a re-assessment is made in accordance with paragraph (a) of this section that confirms that the individual meets the Qualification Requirements.

(c) *Qualification Requirements.* Each signal person must:

(1) Know and understand the type of signals used. If hand signals are used, the signal person must know and understand the Standard Method for hand signals.

(2) Be competent in the application of the type of signals used.

(3) Have a basic understanding of equipment operation and limitations, including the crane dynamics involved in swinging and stopping loads and boom deflection from hoisting loads.

(4) Know and understand the relevant requirements of §1926.1419 through §1926.1422 and §1926.1428.

(5) Demonstrate that he/she meets the requirements in paragraphs (c)(1) through (4) of this section through an oral or written test, and through a practical test.

§ 1926.1429 Qualifications of maintenance & repair employees.

(a) Maintenance, inspection and repair personnel are permitted to operate the equipment only where all of the following requirements are met:

(1) The operation is limited to those functions necessary to perform maintenance, inspect the equipment, or verify its performance.

(2) The personnel either:

(i) Operate the equipment under the direct supervision of an operator who meets the requirements of §1926.1427 (Operator qualification and certification); or

(ii) Are familiar with the operation, limitations, characteristics and hazards associated with the type of equipment.

(b) Maintenance and repair personnel must meet the definition of a qualified person with respect to the equipment and maintenance/repair tasks performed.

§ 1926.1430 Training.

The employer must provide training as follows:

(a) *Overhead powerlines.* The employer must train each employee specified in §1926.1408(g) and §1926.1410(m) in the topics listed in §1926.1408(g).

(b) *Signal persons.* The employer must train each employee who will be assigned to work as a signal persons who does not meet the requirements of §1926.1428(c) in the areas addressed in that paragraph.

(c) *Operators.*

(1) *Operators-in-Training for equipment where certification or qualification is required by this subpart.* The employer must train each operator-in-training in the areas addressed in §1926.1427(j). The employer must provide re-training if the operator-in-training does not pass a qualification or certification test.

(2) *Transitional Period.* During the four-year phase-in period for operator certification or qualification, as provided in §1926.1427(k), employers must train each operator who has not yet been certified or qualified in the areas addressed in §1926.1427(j).

(3) *Operators excepted from the requirements of §1926.1427.* The employer must train each operator excepted under §1926.1427(a) from the requirements of §1926.1427 on the safe operation of the equipment the operator will be using.

(4) The employer must train each operator of the equipment covered by this subpart in the following practices:

(i) On friction equipment, whenever moving a boom off a support, first raise the boom a short distance (sufficient to take the load of the boom) to determine if the boom hoist brake needs to

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be adjusted. On other types of equipment with a boom, the same practice is applicable, except that typically there is no means of adjusting the brake; if the brake does not hold, a repair is necessary. *See* § 1926.1417(f) and (j) for additional requirements.

(ii) Where available, the manufacturer's emergency procedures for halting unintended equipment movement.

(d) *Competent persons and qualified persons.* The employer must train each competent person and each qualified person regarding the requirements of this subpart applicable to their respective roles.

(e) *Crush/pinch points.* The employer must train each employee who works with the equipment to keep clear of holes, and crush/pinch points and the hazards addressed in § 1926.1424 (Work area control).

(f) *Tag-out.* The employer must train each operator and each additional employee authorized to start/energize equipment or operate equipment controls (such as maintenance and repair employees), in the tag-out and start-up procedures in §§ 1926.1417(f) and (g).

(g) *Training administration.*

(1) The employer must evaluate each employee required to be trained under this subpart to confirm that the employee understands the information provided in the training.

(2) The employer must provide refresher training in relevant topics for each employee when, based on the conduct of the employee or an evaluation of the employee's knowledge, there is an indication that retraining is necessary.

(3) Whenever training is required under subpart CC, the employer must provide the training at no cost to the employee.

§ 1926.1431 Hoisting personnel.

The requirements of this section are supplemental to the other requirements in this subpart and apply when one or more employees are hoisted.

(a) The use of equipment to hoist employees is prohibited except where the employer demonstrates that the erection, use, and dismantling of conventional means of reaching the work area, such as a personnel hoist, ladder, stairway, aerial lift, elevating work

platform, or scaffold, would be more hazardous, or is not possible because of the project's structural design or work-site conditions. This paragraph does not apply to work covered by subpart R (Steel Erection) of this part.

(b) *Use of personnel platform.*

(1) When using equipment to hoist employees, the employees must be in a personnel platform that meets the requirements of paragraph (e) of this section.

(2) *Exceptions:* A personnel platform is not required for hoisting employees:

(i) Into and out of drill shafts that are up to and including 8 feet in diameter (*see* paragraph (o) of this section for requirements for hoisting these employees).

(ii) In pile driving operations (*see* paragraph (p) of this section for requirements for hoisting these employees).

(iii) Solely for transfer to or from a marine worksite in a marine-hoisted personnel transfer device (*see* paragraph (r) of this section for requirements for hoisting these employees).

(iv) In storage-tank (steel or concrete), shaft and chimney operations (*see* paragraph (s) of this section for requirements for hoisting these employees).

(c) *Equipment set-up.*

(1) The equipment must be uniformly level, within one percent of level grade, and located on footing that a qualified person has determined to be sufficiently firm and stable.

(2) Equipment with outriggers or stabilizers must have them all extended and locked. The amount of extension must be the same for all outriggers and stabilizers and in accordance with manufacturer procedures and load charts.

(d) *Equipment criteria.*

(1) *Capacity: Use of suspended personnel platforms.* The total load (with the platform loaded, including the hook, load line and rigging) must not exceed 50 percent of the rated capacity for the radius and configuration of the equipment, except during proof testing.

(2) *Capacity: Use of boom-attached personnel platforms.* The total weight of the loaded personnel platform must not exceed 50 percent of the rated capacity for the radius and configuration of the